

REMARKS

Claims 2-14, 16-28, 30-42 and 44-54 are pending. Claims 4, 5, 18, 19, 32, 33, 46 and 47 are rejected under 35 U.S.C. §112, second paragraph. Claims 5, 19, 33 and 47 are rejected under 35 U.S.C. §102(b). Claims 2-4, 6-14, 16-18, 20-28, 30-32, 34-42, 44-46 and 48-54 are rejected under 35 U.S.C. §103(a). Applicants respectfully traverse these rejections for at least the reasons stated below and respectfully request that the Examiner reconsider and withdraw these rejections.

I. REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH:

The Examiner has rejected claims 4, 5, 18, 19, 32, 33, 46 and 47 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Office Action (1/25/2006), page 2. In particular, the Examiner states that the limitation of "two or more sequence numbers are associated with a destination node" in claims 4, 5, 18, 19, 32, 33, 46 and 47 is unclear. Office Action (1/25/2006), page 2. Applicants respectfully traverse the assertion that claims 4, 5, 18, 19, 32, 33, 46 and 47 fail to particularly point out and distinctly claim the subject matter which Applicants regard as the invention

As stated above, the Examiner's basis for rejecting claims 4, 5, 18, 19, 32, 33, 46 and 47 under 35 U.S.C. §112, second paragraph, is because the Examiner believes the limitation of "two or more sequence numbers are associated with a destination node" in claims 4, 5, 18, 19, 32, 33, 46 and 47 is unclear. Applicants respectfully direct the Examiner's attention to at least page 14, line 16 – page 15, line 22 of Applicants' Specification. In particular, Applicants' Specification discusses the frame including various fields including an identifier field. Page 14, lines 19-21. Applicants' Specification further discloses that the identifier field may include a plurality of entries where each entry may store a sequence number associated with a particular destination node. Page 14, lines 26-28. Applicants' Specification further discloses that the sequence number may refer to the particular order of the frame transmitted by the transmitting node to a particular destination node. Page 15, lines 10-13. Applicants' Specification further discloses that the identifier field may include

a plurality of entries where each entry stores a sequence number associated with a particular destination node. Page 15, lines 4-22. Applicants' Specification further discloses that the sequence number stored in an entry may refer to the particular order of the frame transmitted by the transmitting node to that particular destination node with respect to the transmission of other frames to that particular destination node. Page 15, lines 10-13. Therefore, Applicants respectfully disagree that the language of the claim or the specification is unclear on how sequence numbers are associated with a particular destination node. Contrary to the Examiner's assertion that this claim limitation stands in sharp contrast with what is known in the art and provided as a support in the specification, this aspect of the present invention provides for an asynchronous method for managing the sequence of frames sent to a plurality of destination nodes; for example, in a multicast, the method provides for a way for multiple destination nodes to start or stop a given streamed content independent of one another, such that each frame represents a different sequence number for each destination node. Also, the Examiner has not sufficiently considered the novel utility of this method for enabling the transmitting node to store a single copy of the transmitted frame, instead of multiple copies. Specification, Page 8, lines 5-9.

Thus, the scope of claims 4, 5, 18, 19, 32, 33, 46 and 47, and in particular, the limitation of "two or more sequence numbers are associated with a destination node" would be clear to a hypothetical person possessing the ordinary level of skill in the pertinent art. According to M.P.E.P. §2171, a claim particularly points out and distinctly defines the metes and bounds of the subject matter if the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art. Hence, claims 4, 5, 18, 19, 32, 33, 46 and 47 particularly points out and distinctly defines the metes and bounds of the subject matter. Consequently, Applicants respectfully assert that claims 4, 5, 18, 19, 32, 33, 46 and 47 are allowable under 35 U.S.C. §112, second paragraph, and respectfully request the Examiner to withdraw the rejections of claims 4, 5, 18, 19, 32, 33, 46 and 47 under 35 U.S.C. §112, second paragraph. M.P.E.P. §2171.

Further, the Examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 U.S.C. §112, second paragraph, should be whether the claim meets the threshold requirement of clarity and precision, not whether more suitable language or modes of expression are available. M.P.E.P. §2173.02. Definiteness of claim language must be analyzed, not in a vacuum, but in light of the content of the particular application disclosure; the teachings of the prior art; and the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. M.P.E.P. §2173.02. In reviewing a claim for compliance with 35 U.S.C. §112, second paragraph, the Examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. §112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. *See, e.g., Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379, 55 U.S.P.Q.2d 1279, 1283 (Fed. Cir. 2000); M.P.E.P. §2173.02. As shown above, the scope of claims 4, 5, 18, 19, 32, 33, 46 and 47 and in particular the limitation "two or more sequence numbers are associated with a destination node," when analyzed in light of the Specification, can be determined by one of ordinary skill in the art and therefore serves the notice function required by 35 U.S.C. §112, second paragraph. Consequently, Applicants respectfully assert that claims 4, 5, 18, 19, 32, 33, 46 and 47 are allowable under 35 U.S.C. §112, second paragraph, and respectfully request the Examiner to withdraw the rejections of claims 4, 5, 18, 19, 32, 33, 46 and 47 under 35 U.S.C. §112, second paragraph.

II. REJECTIONS UNDER 35 U.S.C. §102(b):

The Examiner has rejected claims 5, 19, 33 and 47 under 35 U.S.C. §102(b) as being anticipated by Gopal et al. (*Multicasting Groups Over Broadcast Channels*, *IEEE*, July 1994, pages 2423-2431) (hereinafter "Gopal"). Applicants respectfully traverse these rejections for at least the reasons stated below and respectfully request that the Examiner reconsider and withdraw these rejections.

For a claim to be anticipated under 35 U.S.C. §102, each and every claim limitation must be found within the cited prior art reference and arranged as required by the claim. M.P.E.P. §2131.

Applicants respectfully assert that Gopal does not disclose "receiving an acknowledgement from a particular destination node of said two or more destination nodes" as recited in claim 5 and similarly in claims 19, 33 and 47. The Examiner states that Gopal inherently discloses the above-cited claim limitation. Office Action (1/25/2006), page 3. In particular, the Examiner states:

Gopal's system and all embodiments described focus on a data link protocol that ensures reliable sequential delivery of messages to all destinations as indicated in the last line of the first paragraph of the Introduction Section. He goes on to indicate in the second paragraph to indicate that such protocol is an ARQ protocol like selective repeat or Go-back-N and Acknowledgments from the destination are registered at the source. Gopal's system involves a single source broadcasting to multiple destinations. It is inherent to systems like Gopal that use ARQ protocol to receive some form of Acknowledgment from a subset of destinations involved in the system. Office Action (1/25/2006), page 3.

Applicants respectfully traverse. The second paragraph in the Introduction section of Gopal discloses that several works have been published recently on multicast data link protocols. Gopal further discloses that all of these works address the specific issue of a single 'session,' namely, the situation in which the single source communicates with a given and fixed group of destinations. Gopal further discloses that in that context the issues considered are, for example, alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. Gopal further discloses that in Gopal's paper, Gopal addresses an important issue not addressed in previous works. (Third Paragraph in Introduction section). Hence, Gopal discloses works that considered alternatives for registering the acknowledgments at the source. This is contrary to the concept of receiving an acknowledgement from a particular destination node. Thus, Gopal does not disclose all of the limitations of claims 5, 19, 33 and 47, and thus Gopal does not anticipate claims 5, 19, 33 and 47. M.P.E.P. §2131.

Further, there is no language in the cited passages of Gopal that directly discusses ARQ as asserted by the Examiner. ARQ (Automatic Repeat request) may refer to a method of handling communications errors in which the receiving station requests retransmission if an error occurs. See www.techweb.com/encyclopedia. Gopal simply mentions retransmission policies. While these retransmission policies may include a policy for retransmitting a message, there is no language that specifically identifies the ARQ method. Further, retransmitting a message does not imply the teaching of receiving an acknowledgement from a particular destination node of the two or more destination nodes that received a transmitted frame. Thus, Gopal does not disclose all of the limitations of claims 5, 19, 33 and 47, and thus Gopal does not anticipate claims 5, 19, 33 and 47. M.P.E.P. §2131.

The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently discloses receiving an acknowledgement from a particular destination node of the two or more destination nodes that received a transmitted frame that included two or more sequence numbers associated with a destination node. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Gopal inherently discloses receiving an acknowledgement from a particular destination node of the two or more destination nodes that received a transmitted frame that included two or more sequence numbers associated with a destination node, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of anticipation in rejecting claims 5, 19, 33 and 47. M.P.E.P. §2112.

III. REJECTIONS UNDER 35 U.S.C. §103(a):

The Examiner has rejected claims 4, 13, 14, 18, 27, 28, 32, 41, 42 and 46 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum ("Computer Networks," Pages 190-219, Prentice-Hall, 3rd Edition, 1996) (hereinafter "Tanenbaum"). The Examiner has further rejected claims 9-11, 23-25, 37-39 and 51-53 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopel et al. ("Point-to-Multipoint Communication over Broadcast Links, IEEE, September 1984,

pages 1034-1044) (hereinafter "Gopal'84"). The Examiner has further rejected claims 12, 26, 40 and 54 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and in further view of Tanenbaum. The Examiner has further rejected claims 6, 7, 20, 21, 34, 35, 48 and 49 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and in further view of Kawan et al. (U.S. Patent No. 5,572,572) (hereinafter "Kawan"). The Examiner has further rejected claims 8, 22, 36 and 50 under U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and in further view of Bennett et al. (U.S. Publication No. 2005/0021832) (hereinafter "Bennett"). The Examiner has further rejected claims 82, 16, 30 and 44 under U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and in further view of Kalkunte et al. (U.S. Publication No. 2003/0118016) (hereinafter "Kalkunte"). The Examiner has further rejected claims 82, 16, 30 and 44 under U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and Kalkunte and in further view of Bennett. Applicants respectfully traverse these rejections for at least the reasons stated below and respectfully request that the Examiner reconsider and withdraw these rejections.

A. Claims 4, 13, 14, 18, 27, 28, 32, 41, 42 and 46 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum.

1. Claims 13, 14, 27, 28, 41 and 42 are not taught or suggested by Gopal in view of Tanenbaum.

Applicants respectfully assert that Gopal and Tanenbaum, taken singly or in combination, do not teach or suggest "retransmitting said frame to said particular destination node of said two or more destination nodes" as recited in claim 13 and similarly in claims 27 and 41. The Examiner cites page 2425, column 1, lines 27-25 of Gopal as teaching the above-cited claim limitation. Office Action (1/25/2006), page 4. Applicants respectfully traverse and assert that Gopal instead teaches retransmitting the message to all destinations when the transmitter realizes that a message was not received by all the destinations. Page 2525, column 1, lines 27-35. Gopal does not teach retransmitting a frame to a particular destination node of the two or more destination nodes, where a request was received from the particular destination node to retransmit the frame. Therefore, the Examiner has not presented a

prima facie case of obviousness in rejecting claims 13, 27 and 41, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Claims 14, 28 and 42 each recite combinations of features of claims 13, 27 and 41, respectively, and thus are patentable over Gopal in view of Tanenbaum for at least the above-stated reasons.

2. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46.

Most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention may often be found in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach saving a copy of the transmitted frame, as recited in claim 4 and similarly in claims 18, 32 and 46. Office Action (1/25/2006), page 5. The Examiner modifies Gopal with Tanenbaum to

include the above-cited claim limitation because "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 5. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to save a copy of the transmitted frame, as recited in claims 4, 18, 32 and 46. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to save a copy of the transmitted frame, as recited in claims 4, 18, 32 and 46, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to save a copy of the transmitted frame (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to save a copy of the transmitted frame. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 4, 18, 32 and 46. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *Id.*

3. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed.

Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach receiving a request to retransmit the frame from a particular destination node of the two or more destination nodes, as recited in claim 13 and similarly in claims 27 and 41. Office Action (1/25/2006), page 5. The Examiner modifies Gopal with Tanenbaum to include the above-cited claim limitation because "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 5. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes, as recited in claims 13, 27 and 41. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 13, 14, 27, 28, 41 and 42. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes, as recited in claims 13, 27 and 41, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal

teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 13, 14, 27, 28, 41 and 42. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 13, 27 and 41. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 13, 14, 27, 28, 41 and 42. *Id.*

4. The Examiner's motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach saving a copy of the transmitted frame, as recited in claim 4 and similarly in claims 18, 32 and 46. Office Action (1/25/2006), page 5. The Examiner modifies Gopal with Tanenbaum to include the above-cited claim limitation because "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 5.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to save a copy of the transmitted frame, as recited in claims 4, 18, 32 and 46. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46 *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to save a copy of the transmitted frame, as recited in claims 4, 18, 32 and 46, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the passage cited in Gopal and saving a copy of the transmitted frame. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to save a copy of the transmitted frame (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to save a copy of the transmitted frame. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims

4, 18, 32 and 46. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *Id.*

5. The Examiner has not provided a motivation for modifying Gopal to include the limitations of claims 13, 27 and 41.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner further admits that Gopal does not teach retransmitting the frame to the particular destination node of the two or more destination nodes, as recited in claim 13 and similarly in claims 27 and 41. Office Action (1/25/2006), page 5. The Examiner modifies Gopal with Tanenbaum to include the above-cited claim limitation but does not specifically state a motivation for making such a modification. As stated above, the Examiner is required to provide a motivation for modifying Gopal to include a missing claim limitation in order to establish a *prima facie* case of obviousness. M.P.E.P. §§2142-2143. Since the Examiner has not provided such motivation, the Examiner has not established a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42. M.P.E.P. §2143.

B. Claims 9-11, 23-25, 37-39 and 51-53 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84.

1. Gopal and Gopal'84, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicants respectfully assert that Gopal and Gopal'84, taken singly or in combination, do not teach or suggest "reading a data structure associated with said frame associated with said acknowledgment" as recited in claim 9 and similarly in claims 23, 37 and 51. The Examiner states that it is inherent for Gopal to read a data structure associated with a frame associated with an acknowledgment. Office Action (1/25/2006), page 6. Applicants respectfully traverse.

Gopal teaches that acknowledgments are sent for every message upon its acceptance as well as for the most recently accepted message. Page 2425. However, there is no language and the Examiner has not presented any evidence for a person of ordinary skill in the art to conclude that sending acknowledgments necessarily concludes the teaching of reading a data structure associated with a frame associated with the acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51. M.P.E.P. §2143.

Applicants further assert that Gopal and Gopal'84, taken singly or in combination, do not teach or suggest "identifying said particular destination node; identifying a frame associated with said acknowledgment; and indicating in an entry in said data structure associated with said particular destination node that a frame associated with said acknowledgment from said particular destination node has been received" as recited in claim 9 and similarly in claims 23, 37 and 51. The Examiner

cites Figure 5 and section 3 on page 1036 of Gopal'84 as teaching the above-cited claim limitation. Office Action (1/25/2006) page 7. Applicants respectfully traverse and assert that Gopal'84 instead teaches that the "full memory go-back-n" protocol updates the ack_outstanding list different from the previously two protocols. Section 3, page 1036. Gopal'84 further teaches that upon receipt of an acknowledgment for a message from a receiver, that receiver is only removed from the ack_outstanding list if it is not on the ack_outstanding list of any previous message. Section 3, page 1036. Gopal'84 further teaches that this extra check ensures that the messages arrive in sequence at the receivers. Section 3, page 1036. Gopal'84 further teaches that it is made necessary by the fact that the receivers generate acknowledgments for certain messages that are subsequently discarded. Section 3, page 1036. Gopal'84 further teaches that as in the previous two protocols, when the time-out counter for a message expires, the transmitter goes back and retransmits the unsuccessful message and all messages subsequent to it. Section 3, page 1036.

There is no language in the cited passage that teaches identifying a particular destination node. Neither is there any language in the cited passage that teaches identifying a frame associated with an acknowledgment. Neither is there any language in the cited passage that teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references

themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. See *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying the particular destination node; identifying a frame associated with the acknowledgment; and indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received, as recited in claim 9 and similarly in claims 23, 37 and 51. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is to "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 8.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the above-cited claim limitations of claims 9, 23, 37 and 52. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 9, 23, 37 and 52. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to include the missing claim limitations of claims 9, 23, 37 and 51, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and

destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the passage cited in Gopal and the above-cited claim limitations. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 9, 23, 37 and 51. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to identify the particular destination node; identify a frame associated with the acknowledgment; and indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (Examiner admits that Gopal does not teach these limitations). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to identify the particular destination node; identify a frame associated with the acknowledgment; and indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 9, 23, 37 and 51. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 9, 23, 37 and 51. *Id.*

3. The Examiner has not provided a motivation for modifying Gopal to include the limitations of claims 10, 24, 38 and 52.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach determining if there are outstanding responses for the frame associated with the acknowledgment, as recited in claim 10 and similarly in claims 24, 38 and 52. Office Action (1/25/2006), page 8. The Examiner modifies Gopal with Gopal'84 to include the above-cited claim limitation but does not specifically state a motivation for making such a modification. As stated above, the Examiner is required to provide a motivation for modifying Gopal to include a missing claim limitation in order to establish a *prima facie* case of obviousness. M.P.E.P. §§2142-2143. Since the Examiner has not provided such motivation, the Examiner has not established a *prima facie* case of obviousness in rejecting claims 10, 24, 38 and 52. M.P.E.P. §2143.

4. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 11, 25, 39 and 53.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach waiting to receive an additional acknowledgment if there are outstanding responses for the frame associated with the acknowledgment, as recited in claim 11 and similarly in claims 25, 39 and 53. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is to "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), pages 9-10.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the above-cited claim limitation of claims 11, 25, 39 and 53. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 11, 25, 39 and 53. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to include the missing claim limitation of claims 11, 25, 39 and 53, is column 1, section

1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the passage cited in Gopal and the above-cited claim limitation. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 11, 25, 39 and 53. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to wait to receive an additional acknowledgment if there are outstanding responses for the frame associated with the acknowledgment (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to wait to receive an additional acknowledgment if there are outstanding responses for the frame associated with the acknowledgment. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 11, 25, 39 and 53. *In re Lee*, 61 U.S.P.Q.2d 1430,

1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 11, 25, 39 and 53. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 11, 25, 39 and 53. *Id.*

C. Claims 12, 26, 40 and 54 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and Tanenbaum.

1. Gopal, Gopal'84 and Tanenbaum, taken singly or in combination, do not teach or suggest the claim limitation of claims 12, 26, 40 and 54.

Applicants respectfully assert that Gopal, Gopal'84 and Tanenbaum, taken singly or in combination, do not teach or suggest "wherein if there are no outstanding responses for said frame then the method further comprises the step of: releasing memory associated with said frame associated with said acknowledgment" as recited in claim 12 and similarly in claims 26, 40 and 54. The Examiner cites page 204, lines 11-16 and the last paragraph on page 212 of Tanenbaum as teaching the above-cited claim limitation. Office Action (1/25/2006), page 11. Applicants respectfully traverse and assert that Tanenbaum instead teaches that since frames currently within the sender's window may ultimately be lost or damaged in transit, the sender must keep all these frames in its memory for possible retransmission. Page 204, lines 11-13. Tanenbaum further teaches that although protocol 5 does not buffer the frames arriving after an error, it does not escape the problem of buffering altogether. Last paragraph, page 212. There is no language in the cited passages that teaches releasing memory associated with a frame. Neither is there any language in the cited passages that teaches releasing memory associated with a frame associated with an acknowledgment. Neither is there any language in the cited passages that teaches releasing memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54.

As stated above, most if not all inventions arise from a combination of old elements. See *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention may often be found in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See *Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. See *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach releasing memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame, as recited in claim 12 and similarly in claims 26, 40 and 54. Office Action (1/25/2006), page 10. The Examiner modifies Gopal with Tanenbaum to include the above-cited claim limitation because "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 11. The Examiner's

motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to release memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame, as recited in claims 12, 26, 40 and 54. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 12, 26, 40 and 54. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to save a copy of the transmitted frame, as recited in claims 12, 26, 40 and 54, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the passage cited in Gopal and releasing memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 12, 26, 40 and 54. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art

would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to release memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to release memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 12, 26, 40 and 54. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 12, 26, 40 and 54. *Id.*

D. Claims 6, 7, 20, 21, 34, 35, 48 and 49 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and Kawan.

1. Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicants respectfully assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "identifying said particular destination node; identifying a frame associated with said acknowledgment" as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner cites Figure 5 of Gopal'84 as teaching the above-cited claim limitation. Office Action (1/25/2006), page 12. Applicants respectfully traverse and assert that Gopal'84 instead teaches that the "full memory go-back-n" protocol updates the ack_outstanding list different from the previously two protocols. Section 3, page 1036. Gopal'84 further teaches that upon

receipt of an acknowledgment for a message from a receiver, that receiver is only removed from the ack_outstanding list if it is not on the ack_outstanding list of any previous message. Section 3, page 1036. Gopal'84 further teaches that this extra check ensures that the messages arrive in sequence at the receivers. Section 3, page 1036. Gopal'84 further teaches that it is made necessary by the fact that the receivers generate acknowledgments for certain messages that are subsequently discarded. Section 3, page 1036. Gopal'84 further teaches that as in the previous two protocols, when the time-out counter for a message expires, the transmitter goes back and retransmits the unsuccessful message and all messages subsequent to it. Section 3, page 1036.

There is no language in the cited passage that teaches identifying a particular destination node. Neither is there any language in the cited passage that teaches identifying a frame associated with an acknowledgment. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicants further assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "reading a data structure associated with said frame associated with said acknowledgment" as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner states that it is inherent for Gopal to read a data structure associated with a frame associated with an acknowledgment. Office Action (1/25/2006), page 12. Applicants respectfully traverse.

Gopal teaches that acknowledgments are sent for every message upon its acceptance as well as for the most recently accepted message. Page 2425. However, there is no language and the Examiner has not presented any evidence for a person of ordinary skill in the art to conclude that sending acknowledgments necessarily concludes the teaching of reading a data structure associated with a frame associated with the acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the

Examiner must provide extrinsic evidence that must make clear that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48. M.P.E.P. §2143.

Applicants further assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "determining if a sequence number associated with said acknowledgment is greater than an expected sequence number" as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner cites column 21, lines 7-21 of Kawan as teaching the above-cited claim limitation. Office Action (1/25/2006), page 15. Applicants respectfully traverse and assert that Kawan instead teaches that if the transmitting device has stored one or more messages which higher sequence numbers than the last received acknowledgment number, those messages with a greater sequence number are retransmitted. Column 21, lines 11-14. Kawan further teaches that when an acknowledgment number is received, all stored messages having sequence numbers less than or equal to the last received acknowledgment are discarded. Column 21, lines 14-17. Hence, Kawan does not teach determining if a sequence number associated with an acknowledgment is greater than an expected sequence number. Instead, Kawan simply teaches performing one of two tasks (discarding or retransmitting messages) based on the received sequence number. Kawan does not teach determining whether the received sequence number is a particular sequence number as expected. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicants further assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "wherein if said sequence number associated with said acknowledgment is greater than said expected sequence number then the method further comprises the step of: detecting a lost acknowledgment" as recited in claim 7 and similarly in claims 21, 35 and 49. The Examiner cites column 21, lines

7-21 of Kawan as teaching the above-cited claim limitation. Office Action (1/25/2006), page 16. Applicants respectfully traverse and assert that Kawan instead teaches that if the transmitting device has stored one or more messages which higher sequence numbers than the last received acknowledgment number, those messages with a greater sequence number are retransmitted. Column 21, lines 11-14. Kawan further teaches that when an acknowledgment number is received, all stored messages having sequence numbers less than or equal to the last received acknowledgment are discarded. Column 21, lines 14-17. Hence, Kawan does not teach detecting a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number. Instead, Kawan simply teaches performing one of two tasks (discarding or retransmitting messages) based on the received sequence number. Kawan does not teach determining whether the received sequence number is a particular sequence number as expected. Hence, Kawan does not teach detecting a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 7, 21, 35 and 49, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner has not provided a motivation for modifying Gopal and Gopal'84 with Kawan.

As stated above, a *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner admits that Gopal and Gopal'84 do not teach determining if a sequence number associated with the acknowledgment is greater than an expected sequence number, as recited in claim 6 and similarly in claims 20, 34 and 48. Office Action (1/25/2006), page 12. The Examiner modifies Gopal and Gopal'84 with Kawan to include the above-cited claim limitation. Office Action (1/25/2006), page 14. As stated above, the Examiner is required to provide a motivation for modifying Gopal to include a missing claim limitation in order to establish a *prima facie* case of obviousness. M.P.E.P. §§2142-2143. Since the Examiner has not provided such motivation, the Examiner has not established a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48. M.P.E.P. §2143.

3. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying the particular destination node; identifying a frame associated with the acknowledgment, as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is to "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and

Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), pages 13-14.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the above-cited claim limitations of claims 6, 20, 34 and 48. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to include the missing claim limitations of claims 6, 20, 34 and 48, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the passage cited in Gopal and the above-cited claim limitations. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the

number of destinations actually in communication with the source, to identify the particular destination node; and identify a frame associated with the acknowledgment (Examiner admits that Gopal does not teach these limitations). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to identify the particular destination node and identify a frame associated with the acknowledgment. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 6, 20, 34 and 48. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *Id.*

4. The Examiner's motivation for modifying Gopal to include the limitation of claims 7, 21, 35 and 49 is insufficient to establish a *prima facie* case of obviousness.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach detecting a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number, as recited in claim 7 and similarly in claims 21, 35 and 49. The Examiner's motivation for modifying Gopal with Kwan to include the above-cited claim limitation is to "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 15.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to detect a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number, as recited in claims 7, 21, 35 and 49. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7, 21, 35 and 49. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to include the missing claim limitations of claims 7, 21, 35 and 49, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the

passage cited in Gopal and the above-cited claim limitation. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7, 21, 35 and 49. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to detect a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to detect a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 7, 21, 35 and 49. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 7, 21, 35 and 49. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7, 21, 35 and 49. *Id.*

E. Claims 8, 22, 36 and 50 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and Bennett.

1. Gopal, Gopal'84 and Bennett, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicants respectfully assert that Gopal, Gopal'84 and Bennett, taken singly or in combination, do not teach or suggest "identifying said particular destination node; identifying a frame associated with said acknowledgment; reading a data structure associated with said frame associated with said acknowledgment; indicating in an entry in said data structure associated with said particular destination node that a frame associated with said acknowledgment from said particular destination node has been received" as recited in claim 8 and similarly in claims 22, 36 and 50. The Examiner cites Figure 5 and section 3 on page 1036 of Gopal'84 as teaching the above-cited claim limitation. Office Action (1/25/2006), page 18. Applicants respectfully traverse and assert that Gopal'84 instead teaches that the "full memory go-back-n" protocol updates the ack_outstanding list different from the previously two protocols. Section 3, page 1036. Gopal'84 further teaches that upon receipt of an acknowledgment for a message from a receiver, that receiver is only removed from the ack_outstanding list if it is not on the ack_outstanding list of any previous message. Section 3, page 1036. Gopal'84 further teaches that this extra check ensures that the messages arrive in sequence at the receivers. Section 3, page 1036. Gopal'84 further teaches that it is made necessary by the fact that the receivers generate acknowledgments for certain messages that are subsequently discarded. Section 3, page 1036. Gopal'84 further teaches that as in the previous two protocols, when the time-out counter for a message expires, the transmitter goes back and retransmits the unsuccessful message and all messages subsequent to it. Section 3, page 1036.

There is no language in the cited passage that teaches identifying a particular destination node. Neither is there any language in the cited passage that teaches identifying a frame associated with an acknowledgment. Neither is there any language in the cited passage that teaches reading a data structure associated with the frame associated with the acknowledgment. Neither is there any language in the cited passage that teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50, since

the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Further, the Examiner states that it is inherent for Gopal to read a data structure associated with a frame associated with an acknowledgment. Office Action (1/25/2006), page 16. Applicants respectfully traverse. Gopal teaches that acknowledgments are sent for every message upon its acceptance as well as for the most recently accepted message. Page 2425. However, there is no language and the Examiner has not presented any evidence for a person of ordinary skill in the art to conclude that sending acknowledgments necessarily concludes the teaching of reading a data structure associated with a frame associated with the acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50. M.P.E.P. §2143.

Furthermore, if the Examiner is asserting that Gopal'84 inherently teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (Office Action (1/25/2006), page 17), then Applicants respectfully traverse and assert that the Examiner must provide a basis in fact and/or technical reasoning to support the assertion that Gopal'84 inherently teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must make clear that Gopal'84 inherently teaches indicating in an entry in the data structure associated with the particular destination

node that a frame associated with the acknowledgment from the particular destination node has been received, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support the inherency argument with objective evidence meeting the above requirements. Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. M.P.E.P. §2143.

Applicants further assert that Gopal, Gopal'84 and Bennett, taken singly or in combination, do not teach or suggest "identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in said data structure with said particular destination node as having been received" as recited in claim 8 and similarly in claims 22, 36 and 50. The Examiner cites Figure 5 and paragraphs 10, 47 and 60 of Bennett as teaching the above-cited claim limitation. Office Action (1/25/2006), page 19. Applicants respectfully traverse.

Bennett instead teaches that transmitted messages are temporarily stored as unacknowledged messages in a retransmission queue until the transmitted messages are acknowledged or until a time-out period associated with each of the messages has lapsed. [0010]. Bennett further teaches that to further improve the efficient use of the slow communication link, the data portion may include multiple pieces of information that may be associated with a plurality of controllers, devices, etc., which tends to maximize throughput in view of the fixed overhead associated with the IP portion and the header portion. [0047]. Bennett further teaches that because the underlying deferred acknowledgment communication protocol provides express and implicit acknowledgments for all message bundles, including message bundles containing alarm information such as the message bundles provided by an alarm server process, additional acknowledgments at the alarm management application level can be eliminated. [0069].

There is no language in the cited passages that teaches identifying a previous entry associated with a frame transmitted with an implicit acknowledgment. Neither

is there any language in the cited passages that teaches identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure with a particular destination node. Neither is there any language in the cited passages that teaches identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure with a particular destination node as having been received. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner's motivation for modifying Gopal with Bennett to include the missing limitation of claims 8, 22, 36 and 50 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received, as recited in claim 8 and similarly in claims 22, 36 and 50. The Examiner's motivation for modifying Gopal with Bennett to include the above-cited claim limitation is to "increase[ing] the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link." Office

Action (1/25/2006), page 19. Gopal addresses the problem of restricting the state information maintained by a transmitter to the "active" destinations only. Page 2424, second paragraph. The Examiner's motivation ("to increase the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link ") does not address as to why one of ordinary skill in the art would modify Gopal, which addresses the problem of restricting the state information maintained by a transmitter to the "active" destinations only, to identify a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received. That is, the Examiner has not provided any objective evidence of there being a connection between modifying Gopal to identify a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received for the purpose of increasing the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link. In other words, why would one of ordinary skill in the art modify Gopal to identify a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received in order to increase the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link? Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

3. The Examiner's motivation for modifying Gopal with Gopal'84 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references

themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying the particular destination node; identifying a frame associated with the acknowledgment; and indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received, as recited in claim 8 and similarly in claims 22, 36 and 50. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is to "Gopal indicates that his system is focused on data link protocol that ensures reliable sequential delivery of messages to all destinations and is based on the well known routine Automatic Repeat Request (ARQ) protocol given the fact that it registers Acknowledgements and uses retransmission policy and indicates Go-Back-N and Selective Repeat protocols as an example as stated by Gopal in the last sentence of column 1, section 1, 1st paragraph and column 2, lines 1-8." Office Action (1/25/2006), page 18.

The Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the above-cited claim limitations of claims 8, 22, 36 and 50. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner's source of motivation for modifying Gopal to include the missing claim limitations of claims 8, 22, 36 and 50, is column 1, section 1, 1st paragraph and column 2, lines 1-8 of Gopal. As stated above, the passages of Gopal cited by the Examiner teach alternatives for registering the acknowledgments at the source and the attendant memory requirements, retransmission policy (e.g., go-back-N, selective repeat) and the related memory requirements at both the source and

destination for each poly. This is contrary to the Examiner's assertion that Gopal teaches a well known routine Automatic Repeat Request (ARQ) protocol due allegedly to the fact that Gopal registers acknowledgements. There is no language in Gopal that specifically teaches the use of the ARQ protocol and there is no language in Gopal that specifically teaches registering acknowledgements. Hence, the cited passages do not support the Examiner's assertions made in the Examiner's statement for motivation. Further, the Examiner has not provided any connection between the passage cited in Gopal and the above-cited claim limitations. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to identify the particular destination node; identify a frame associated with the acknowledgment; and indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (Examiner admits that Gopal does not teach these limitations). The Examiner's motivation (alleged use of the ARQ protocol) does not provide such reasoning. That is, the Examiner's motivation does not provide reasons as to why one skilled in the art would modify a reference, whose purpose is to adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to identify the particular destination node; identify a frame associated with the acknowledgment; and indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. The Examiner must provide objective evidence in modifying Gopal to include the above-cited missing limitation of claims 8, 22, 36 and 50. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Instead, the Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50. *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *Id.*

- F. Claims 2, 16, 30 and 44 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and in further view of Kalkunte.

Claims 2, 16, 30 and 44 depend from claims 4, 18, 32 and 46, and hence are patentable over Gopal in view of Tanenbaum and in further view of Kalkunte for at least the reasons that claims 4, 18, 32 and 46 are patentable as stated above.

- G. Claims 3, 17, 31 and 45 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and Kalkunte and in further view of Bennett.

Claims 3, 17, 31 and 45 depend from claims 2, 16, 31 and 45, and hence are patentable over Gopal in view of Tanenbaum and Kalkunte and in further view of Bennett for at least the reasons that claims 2, 16, 31 and 45 are patentable as stated above.

IV. CONCLUSION:

As a result of the foregoing, it is asserted by Applicants that claims 2-14, 16-28, 30-42 and 44-54 in the Application are in condition for allowance, and Applicants respectfully request an allowance of such claims. Applicants respectfully request that the Examiner call Applicants' attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining issues.

Respectfully submitted,

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